

29570 SUB Aqua Plus IQOQ
document

Unique Product Serial number label
placed here

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document contact**

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Contents

Installation Qualification

Instrument Origin and Identification	2
Instrument Specification.....	3
Environment and Siting	4
Instrument Delivery and Documentation	5
Instrument Safety.....	6
Assembly and Installation	7
Summary Report.....	8

Operational Qualification

Safety Tests.....	9
Pre-Run Checks.....	10
Functional Tests.....	11
Calibration.....	12
Training.....	13
Summary Report.....	14

Installation Qualification

Instrument Origin and Identification

Instrument Series:	Unstirred Water Bath
Model:	SUB Aqua Plus
Instrument Description:	Digital thermostatic unstirred water bath
Manufacturer:	Grant Instruments (Cambridge) Ltd Shepreth Cambridgeshire SG8 6GB England http://www.grant.co.uk
Service Contact:	Tel: +44 (0) 1763 260811 Fax: +44 (0) 1763 262410 E-mail: service@grant.co.uk
Serial Number:	
Condition When Received:	<div>New<input type="checkbox"/></div> <div>Used<input type="checkbox"/></div> <div>Reconditioned<input type="checkbox"/></div>
Date Received:	
Installed Location:	
Purchase Order Number:	
Identification / Asset Number:	

Installation Qualification

Instrument Specification

Instrument Parameter	Specified Range	Acceptable
Output Temperature	5°C above ambient to 99°C	<input type="checkbox"/>
Temperature Stability at 37°C	± 0.2°C	<input type="checkbox"/>
Temperature Setting Resolution	0.1°C	<input type="checkbox"/>
Over Temperature Cut-Out	Fixed (thermal fuse) and adjustable (user-defined sample protection)	<input type="checkbox"/>
Bath Fluids	Water only	<input type="checkbox"/>
Bath Capacity	SUB Aqua 2 Plus 2 litre <input type="checkbox"/> SUB Aqua 2S Plus 2 litre <input type="checkbox"/> SUB Aqua 5 Plus 5 litre <input type="checkbox"/> SUB Aqua 12 Plus 12 litre <input type="checkbox"/> SUB Aqua 18 Plus 18 litre <input type="checkbox"/> SUB Aqua 26 Plus 26 litre <input type="checkbox"/> SUB Aqua Dual Plus 5 & 12L <input type="checkbox"/> SUB Aqua 34 Plus 34 litre <input type="checkbox"/>	<input type="checkbox"/>
Comments: 		

Installation Qualification

Environment and Siting

Has the instrument been adequately acclimatised since transport or storage? Yes <input type="checkbox"/> No <input type="checkbox"/> (refer to OM1.2*) * OMX denotes section X of the Operator Manual (also known as Operating Instructions)		
Operating Parameters	Specified Range	Conditions Met
Ambient Temperature	5 – 40°C	<input type="checkbox"/>
Maximum Relative Humidity	80% up to 31°C, decreasing linearly to 50% at 40°C	<input type="checkbox"/>
Maximum Altitude	2,000 m (6,500 ft)	<input type="checkbox"/>
Supply Voltage & Frequency	230V@ 50/60Hz or 120V@ 50/60Hz	<input type="checkbox"/>
Current Rating (Amps)	Model 230V 110V	<input type="checkbox"/>
	SUB Aqua 2 Plus 1.0 <input type="checkbox"/> 0.5 <input type="checkbox"/>	<input type="checkbox"/>
	SUB Aqua 2S Plus 2.6 <input type="checkbox"/> 1.3 <input type="checkbox"/>	
	SUB Aqua 5 Plus 2.6 <input type="checkbox"/> 1.3 <input type="checkbox"/>	
	SUB Aqua12 Plus 5.3 <input type="checkbox"/> 2.7 <input type="checkbox"/>	
	SUB Aqua18 Plus 7.9 <input type="checkbox"/> 5.3 <input type="checkbox"/>	
	SUB Aqua 26 Plus 7.9 <input type="checkbox"/> 5.3 <input type="checkbox"/>	
	SUB Aqua Dual Plus 7.9 <input type="checkbox"/> 4.0 <input type="checkbox"/>	
	SUB Aqua 34 Plus 13.4 <input type="checkbox"/> 8.8 <input type="checkbox"/>	
Comments: 		

Installation Qualification

Instrument Delivery and Documentation

Unpack the instrument carefully. Are any items missing against the Packing List?			
Yes	<input type="checkbox"/>	No	<input type="checkbox"/>
If yes, state missing items: _____			
Is there any damage to the instrument or accessories?			
Yes	<input type="checkbox"/>	No	<input type="checkbox"/>
If yes: Description of damage: _____			
Corrective action: _____			
Manufacturer informed: Yes <input type="checkbox"/> No <input type="checkbox"/>			
Is all standard documentation included?			
	Present	Missing	
Operator Manual (OM)	<input type="checkbox"/>	<input type="checkbox"/>	
Certificate of Conformity	<input type="checkbox"/>	<input type="checkbox"/>	
Quick Start Guide	<input type="checkbox"/>	<input type="checkbox"/>	
Warranty Card (UK only)	<input type="checkbox"/>	<input type="checkbox"/>	
Is all additional documentation included?			
	Requested		
	Present	Missing	Not Requested
Calibration Certificate	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Service Manual (SM)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Performance Qualification (PQ)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Installation Qualification

Instrument Safety

Manufacturer's Safety Recommendations:

Allow enough space for the instrument ☐

Position on level, non-combustible surface indoors ☐

Area free from aggressive / explosive chemical mixtures ☐

Ensure correct power supply and all power switches easily accessible ☐

Beware hot surfaces and hot water both during and after use ☐

For 18 and 26 litre baths, empty the bath before moving it ☐

Do not use to heat material that could cause fire or other hazard ☐

Use safety goggles during high temperature operation ☐

Read Operator Manual before use ☐

Comments:

Installation Qualification

Assembly and Installation

Assembled and Installed By:	User <input type="checkbox"/>	Specialised Engineer <input type="checkbox"/>	
Installation Procedure:	OK	Discrepancy	N / A
Unpack and retain packaging (OM4.1)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Assembly (OM4.2)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Site and connect to power supply (OM4.3, 4.4)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Bath fluid filled correctly (OM5.1.1)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Base tray fitted (OM5.1.3)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Comments (including discrepancies):			

Installation Qualification

Serial Number:

Summary Report

Instrument:		Manufacturer: Grant Instruments	
Assessment of Complete Installation Qualification:			
No Deviations <input type="checkbox"/>		Deviations <input type="checkbox"/> (list below)	
Deviation	Impact on Operation	Justification for Acceptance	
Successful completion of the preceding activities and checks indicates that this instrument has been satisfactorily delivered and installed. The instrument has passed the Installation Qualification procedure and may now be submitted for Operational Qualification.			
IQ Completed By:		Date:	
Deviations Approved By:		Date:	
IQ Approved By:		Date:	

Operational Qualification

Safety Tests

This instrument conforms to the following standards and is supplied fully tested by the manufacturer:

- BS EN 61326:2006 – Electrical equipment for measurement, control and laboratory use – EMC requirements.
- BS EN 61010 Part 2-010:2003 – Safety requirements for electrical equipment for measurement, control and laboratory use – particular requirements for laboratory equipment for the heating of material.

The following electrical safety tests should also be carried out by a competent person after installation.

Safety Test	Refer to	Pass	Fail	Date	Signed
Earth Bonding	OM9.2.3	<input type="checkbox"/>	<input type="checkbox"/>		
Insulation Resistance	OM9.2.3	<input type="checkbox"/>	<input type="checkbox"/>		
Comments:					

Operational Qualification

Pre-Run Checks

Pre-Run Check	Refer to	OK	Discrepancy	N / A
Bath fluid filled correctly	OM5.1.1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Lid / polypropylene spheres in place	OM5.1.2	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Base tray fitted	OM5.1.3	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
All power switches easily accessible	OM4.3	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Comments (including discrepancies):				

Operational Qualification

Functional Tests

Functional Test	Refer to	Acceptance Criteria	Pass	Fail
Powers up	-	1. Display illuminates and shows fluid temperature	<input type="checkbox"/>	<input type="checkbox"/>
Heats fluid to reach set-point temperature	OM5.3.2	1. Display shows fluid temperature increase and rising bar	<input type="checkbox"/>	<input type="checkbox"/>
Controls fluid temperature when set-point reached	OM5.3.2	1. Display shows fluid temperature at set-point and rising bar disappears	<input type="checkbox"/>	<input type="checkbox"/>
Controls fluid temperature when sample protection thermostat level reached (Test by setting sample protection thermostat slightly lower than set-point temperature. Remember to reset sample protection thermostat back above set-point afterwards)	OM5.3.3	1. Display alternates between fluid temperature and 'Err' and audible alarm sounds. 2. Fluid held just above sample protection temperature with greater fluctuation	<input type="checkbox"/>	<input type="checkbox"/>
Water heats to the preset temperature	OM5.3.4 OM5.3.5	1. Display shows 'Pr' then preset temperature when Preset Key 1 is pressed 2. Water reaches preset temp	<input type="checkbox"/>	<input type="checkbox"/>
Countdown timer	OM5.3.6	1. Dot will flash on the display. 2. Alarm sounds at the end of countdown period 3. Alarm stops when enter is pressed	<input type="checkbox"/>	<input type="checkbox"/>
Comments:				

Operational Qualification

Calibration

This instrument is supplied fully calibrated by the manufacturer, using equipment traceable to national standards. Calibration by the user directly following standard installation is not usually required.			
Calibration Step	Refer to	OK	Not Done
Single Point Calibration	OM5.3.9	<input type="checkbox"/>	<input type="checkbox"/>
Twin Point Calibration	OM5.3.10	<input type="checkbox"/>	<input type="checkbox"/>
Traceable Reference Thermometer Serial Number:			
Comments:			

Operational Qualification

Training

Date Instrument Released for Use:			
Trained Operators	Read Operator Manual	Practical Training	Authorising Signature
	<input type="checkbox"/>	<input type="checkbox"/>	
	<input type="checkbox"/>	<input type="checkbox"/>	
	<input type="checkbox"/>	<input type="checkbox"/>	
	<input type="checkbox"/>	<input type="checkbox"/>	
	<input type="checkbox"/>	<input type="checkbox"/>	
	<input type="checkbox"/>	<input type="checkbox"/>	
	<input type="checkbox"/>	<input type="checkbox"/>	
	<input type="checkbox"/>	<input type="checkbox"/>	
	<input type="checkbox"/>	<input type="checkbox"/>	
	<input type="checkbox"/>	<input type="checkbox"/>	
Comments:			

Operational Qualification

Serial Number:

Summary Report

Instrument:	Manufacturer: Grant Instruments		
Assessment of Complete Operational Qualification:			
No Deviations <input type="checkbox"/> Deviations <input type="checkbox"/> (list below)			
Deviation	Impact on Operation	Justification for Acceptance	
Successful completion of the preceding activities and checks indicates that this instrument is operating satisfactorily following delivery and installation. The instrument has passed the Operational Qualification procedure and may now be released for use.			
OQ Completed By:		Date:	
Deviations Approved By:		Date:	
OQ Approved By:		Date:	